AN ECONOMIC ANALYSIS OF THE HOUSING PROBLEM IN THE UNITED STATES

BY

ALVIN CHARLES WHITE

A.B., Augustana College, 1933
M.A., University of Iowa, 1935

AN ABSTRACT OF A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN
ECONOMICS IN THE GRADUATE SCHOOL OF
THE UNIVERSITY OF ILLINOIS, 1943

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Responsibility for the views and conclusions expressed in this study, as well as for any textual errors, is of course entirely my own.

AN ECONOMIC ANALYSIS OF THE HOUSING PROBLEM IN THE UNITED STATES

The housing problem may be defined as the inability of a large proportion of the population to command a quality of housing which meets the minimum standards of health and decency. We do not attempt to set up definite minimum housing standards to be applicable irrespective of time and place, but it is contended that such standards should be rather flexible. For example, in primitive societies the capacity to produce housing of a high quality is lacking, but the need for such dwelling facilities is less urgent than is the case in the congested urban communities which characterize modern times. Recognition of the need for social control of housing is seen in the codes and regulations that are found in all cities. While it is readily admitted that political pressure and corruption often creep into municipal building codes, yet, in essence, the purpose of such regulations is to protect the general welfare from the chaos that results in the absense of such measures. The earliest building regulations were designed to prevent the recurrence of fires and plagues. The congestion of population about factories or centers of commerce created problems which were beyond the power of the "invisible hand" to solve. Fires and plagues were all too common as a result of the haphazard and unplanned construction of homes and cities. The fire that burned Chicago in 1871 is said to have originated with the careless use of a lantern in a cow barn. The open sewers which characterized our cities a few decades ago were also gradually recognized as a public menace. The development of the science of sanitation brought about an increasing demand for collective action for the purpose of protecting the general welfare from the careless or unknowing practices of individuals.

The earlier housing reformers believed that the problems of housing could be solved by the passage of more effective laws of a restrictive and regulative nature. Such men as Lawrence Veiller and Robert DeForest, for example, argued that a solution

of the problem was to be sought in the direction of improved laws and regulations designed to enforce conformance with the standards of health and decency. This point of view seems to overlook what would happen to those people who are financially unable to provide homes for themselves which meet the standards required for the welfare of the community. Standards that are determined on the basis of social needs are such that the cost of housing facilities is in most periods beyond the capacity of the lower-income group to pay. Thus there is a gap between the quality of housing which many people can afford and the standard of housing which is regarded as essential to the general welfare.

It is almost unanimously agreed by students in the field of housing that the quality of our residential facilities has been in the past and is at present inconsistent with standards based upon the requirements of health and decency. It is easy enough for the students of animal husbandry to determine the type of structure that is best suited for the profitable production of livestock. Some of their findings may well be applied to the needs of thousands of human beings, whose present abodes could scarcely qualify to house the favorite pets of the wealthier members of our population. The unanimity of opinion that residential quarters in this country have seldom, if ever, been consistent with minimum standards of health and decency permits us to accept as a premise of our study that private enterprise has not in the past brought into existence a sufficient supply of housing.

During the past ten years, the nation has become more conscious of the housing problem than at any previous time. The recognition of this problem did not come entirely as a result of a growing social consciousness, however, but it was largely induced by the serious thought given to the paradox of want in the midst of plenty which characterized the 1930's. A large segment of the population was led to believe that the solution of the problem of unemployment awaited some line of procedure which would lift the construction industry from the despair of its long period of stagnation. A large proportion of the unemployed could be accounted for throughout the 1930's by the low level of activity in construction, and especially in the construction

of houses. Thus we find many people in various walks of life supporting some form of governmental action to stimulate building. The provision of housing was regarded by many as a means of putting men to work, rather than as a means of providing improved dwelling facilities.

Throughout the discussion concerning the housing problem one finds the controversy between those who assert that private enterprise can and will provide a sufficient supply of housing and those who insist that the attainment of standards of health and decency awaits governmental action of one kind or another. Disagreement, then, has not been centered primarily on the issue as to what should be accepted as a minimum standard of health and decency. Rather, the main bone of contention has been the ability or inability of private enterprise to meet this standard without governmental aid.

It has now become generally recognized that it is desirable for the government to exercise controls of a restrictive and regulative nature in the interest of improving housing facilities. It is likely that building and sanitation codes as well as zoning and city planning laws have become a permanent part of our governmental machinery. It is not unanimously agreed, however, that governmental responsibility for housing should be extended to include measures which involve subsidies. It is the primary purpose of this study to make an economic analysis of housing supply and demand conditions in order to throw some light upon the debate between those who support and those who oppose governmental intervention in the housing field by the employment of some kind of subsidy. Although it is generally recognized that there is a gap between the supply of housing that would meet the minimum standards of health and decency and the actually existing supply, there is considerable disagreement as to the methods whereby that gap can be closed.

Strange as it may seem, economists have given but little consideration to the housing problem. Those who have devoted attention to the problem are usually found to be sociologists, engineers, or architects. Although a field as broad in its aspects as is housing requires the combined resources of many specialists, it seems that a fuller understanding of the housing problem

requires the technique of economic analysis. Many who have presented plans for a solution of the problem have erred because of their inability to view the whole field of housing in comprehensive terms. With this in mind, we proceed to a review of our economic analysis of housing.

We have noted that the cost of housing which meets the minimum standards of health and decency is beyond the capacity of a large proportion of the population to pay. Yet, in the final analysis, the cost of a house is distributed over a long period of years, so that the monthly cost of shelter is the most significant figure. In purchasing a house, a long-term commitment is involved, since the period of time over which the services of the house will be rendered extends far into the future. If the future were absolutely certain, the life-span of a dwelling could be closely estimated, its cost could be divided over the entire period, and the required monthly payments would be low. In this situation the monthly cost of housing would be such that many of those who are ill-housed at present could afford standard dwellings. As things are, it is considered unsound by private financiers to extend the period of amortization beyond 12 or 14 years, and the FHA does not insure beyond 25 years. Yet the life-span of housing can be figured conservatively at a minimum of 50 years.

The prevailing notion that amortization must be carried out during a fraction of the lifetime of a house arises largely from the risk of an uncertain future. It may be said that the risk increases by geometric proportions as the time period of a commitment is extended. Thus, while one characteristic of housing facilities, durability, enables a house to render services over a very long period of time, two other characteristics, immobility and the elasticity of demand for house room, render precarious a financial obligation that extends over less than half the life-span of a house. An analysis of these three characteristics of housing under the assumed conditions of a hypothetical collective state leads to the conclusion that the building industry is inherently unstable, and that it is unlikely that the demand for new housing facilities could be maintained on a stable level even though the standards of housing remain constant. This would mean that the state would have to stand ready to channelize more resources

into housing during periods when increased housing facilities are needed, and it must find other employment for these resources when building requirements diminish. The inflexibility of the adjustment of the supply of and the demand for housing in a dynamic economy is probably more pronounced in a purely laissez faire economy than in a collective state. This inflexibility is explained in part by the three characteristics of housing set forth above. Although the conditions of supply and demand are constantly changing, and new equilibrium points are established, we find that the actual supply of and demand for housing are slow in their response.

The value of a house as of a given time depends upon the future quasi-rents which will be realized during its lifetime. Under the assumptions of the stationary state the amount of those future quasi-rents is foreknown. Hence, there is no problem involved in determining the present value of property by the well-known process of capitalizing the amount of the net rent, or by adding up the discounted quasi-rents that will be received during the lifetime of the property. When we leave the assumptions of a stationary state, however, it becomes impossible to know what the future income from a given piece of property will be. As in the stationary state, the value of the property under dynamic conditions is also dependent upon future quasi-rents, but the amount of these rents will depend upon many variables, none of which can be predicted with a high degree of accuracy. The variables that may be listed on the side of demand are such factors as population growth, the size of families, the national income, the distribution of that income, and the proportion of income devoted to housing. The advent of wars and depressions and periods of both deflation and inflation produce far-reaching effects upon the income from real estate. It should be obvious that a commitment in residential property which may extend over 20 or 25 years assumes a high degree of risk in face of many probable changes in the conditions of demand. While the greater risk stems from the uncertainties of future demand, there is also a risk that the conditions of supply will change. For example, during the past ten years there has been much talk about the possibilities of prefabrication and other technological changes

which would greatly reduce the cost of housing. If the cost of new housing were reduced by a large percentage, the owners of existing houses would stand to lose. Hence, in some measure, there is a risk that future changes in costs or in style may affect the income from existing houses. Thus we see that in a dynamic society the longer the time period required for the amortization of housing the greater is the risk involved.

It is profitable in this connection to note the various ideas in the real estate world concerning the problems of appraising. The appraiser is confronted with the task of attaching a certain value to a specific property. There are three main methods used by appraisers in arriving at their estimates: 1) the comparison of a particular house with other houses of the same general neighborhood, 2) the calculation of the cost of reproduction of the house, and 3) the capitalization prosess. The first method assures a buyer that he is not paying a price that is out of line in comparison with the price of other houses in the neighborhood. The second method enables a prospective home-owner to decide between purchasing an existing house and building a new one. The third method provides the basic source of value in terms of long-run considerations. Many appraisers use all three methods, but there are some who use the first two only. It is believed by some real estate appraisers that it is futile to try to estimate the future income from residential property, and hence the capitalization process yields uncertain and undependable results. Moreover, the market price of much residential property is in a large degree dependent upon a caprice element. Inexperienced buyers are easily attracted by relatively inexpensive improvements in the house, or they may take a liking to the old maple tree in the back yard.

Those who invest in housing on a purely commercial basis, however, must have some idea as to the price they can afford to pay. The characteristics of a sound investment are safety of principal and a reasonable return. If the investment in a house is to be successful, it must be amortized within the lifetime of the house. It is obviously difficult, however, to know how large a sum the future income from a house will amortize. In order to facilitate our discussion, we here introduce two terms which, it is

felt, would be useful in clearing up some of the confusion of real estate terminology. Appraisers often speak about "intrinsic" value and "justified" value. The market price is not to be accepted by appraisers, because it does not usually represent the "real" value of a piece of property, it is claimed. Yet, the appraiser can only estimate the value of the property, and his estimate may vary from that of one or more other appraisers. Thus, it may be desirable to speak of these estimates in terms of *ex-ante* values. The "real" or "intrinsic" values may be called the *ex-post* value. It is the purpose of appraisers and investors to arrive at an estimate—the *ex-ante* value— which is as near as possible to the *ex-post* value of a given property. In a theoretical stationary state, under assumptions which rule out uncertainty, and hence risk, the *ex-ante* values would always coincide with *ex-post* values. As soon as we relax these assumptions, however, and admit the dynamic conditions of the real world, it becomes extremely difficult to arrive at *ex-ante* valuations which time will show to have been justified. In the dynamic world, it is impossible to know *ex-post* values until the passage of time brings with it evidence that an earlier investment was or was not justified. The spread between *ex-ante* values and *ex-post* values is caused largely by changes in the numerous variables which come to bear upon the supply of and the demand for housing facilities in a given market over the period under consideration. It is interesting to note that, even though the original investment in a house might be justified by the income received by its owners throughout the entire period of its existence, the large speculative element involved may have caused some investors to lose and others to gain. For example, the original builder may have been an owner-occupier of the house. His *ex-ante* estimate, we can assume, is the original cost of construction. After a period of ten years, a depression brings widespread unemployment, and the property is taken over by the mortgagee. The original owner loses his equity, and it is probable that the mortgagee liquidates the property at a loss. Likely as not, a speculator obtains title to the house at a low price and holds on to it until the return of prosperity restores property values. He then sells to another home-buyer at a price which nets him, as a speculative profit,

the amount that the original owner lost. This sort of transaction may take place a number of times during the lifetime of the house. Thus, while the total income received by the owners of the house during its entire existence justified the original construction of the house, some of those owners, including the first one, lost money, and some of them made speculative profits. Thus the original owner contracted for his house at a price which the entire life-span of the house proved to have been justified, but he himself suffered the loss of his equity.

The cause for such vagaries of fortune has its basis partly in the fluctuating demand for housing and partly in the necessity for most people to buy their homes on the installment plan. Interest charges and payments on the principal are fixed costs which must be met under penalty of foreclosure. A temporary diminution of the demand for housing is all that is needed to reduce rents and force the landlord to the wall. The advent of unemployment for a relatively short period is sufficient to bring foreclosure to the owner-occupied. During a period when there are a large number of distressed houses on the market, the price of residential property declines without any possibility of support by short-sellers. During such periods, the majority of people does not have the money to buy houses, and loan funds run to hiding. If a way could be found to enable the original owner to hold on to his property during periods of depression, it is believed that an important step would be taken toward the solution of the housing problem.

The risk of foreclosure during a period of depression is perhaps the most serious risk faced by property owners today, but not the only one. Even during periods of full employment, the shifting of population, or a change in the preference scale of consumers may result in a diminished demand for housing in a given market area. Moreover, in the absence of adequate zoning regulations, the value of property might be destroyed by a deterioration in the uses of nearby land. There is also the risk of destruction by fire or by natural disasters, but insurance can provide protection against serious losses in these cases. Thus we see that the element of risk is likely to constitute a serious inhibition to the contruction of an adequate supply of housing facilities. Some

of these risks can be minimized by zoning laws, while others can be shifted by insurance, but the most serious risk of all finds the owner of housing without any method of protection. He cannot foresee the future changes in the conditions of supply and demand, yet those changes may result in a loss as real as that if an uninsured property were destroyed by fire.

Thus, we see that the element of risk is very large in the case of investments in housing. It is noteworthy that wealthy people do not invest very heavily in residential property. Likewise, corporations have thus far shown no desire to enter the field. In fact, it is considered good advice to corporations to limit their holdings in real estate to the bare minimum. Records of business failures show that those corporations which carry a high proportion of fixed costs are the most vulnerable. In nearly all cases, the ownership of real estate involved high fixed costs. The company which rents its real estate can adjust its fixed costs by negotiating for lower rent, but, if it has gone into debt to acquire real property, its fixed costs cannot be easily adjusted to the fluctuations of the business cycle. It should be pointed out, however, that the corporate device may have a tendency to overcome some of the inhibitions to investment in real estate in spite of the risk involved. People as a rule are less fearful of committing their funds to some field of endeavor if they have the privilege of revising their investment from time to time in the future. Thus, the investor may feel less reluctant to purchase stock than real estate, even though that stock may represent shares in real estate. While the transfer of real estate is slow and costly, the organized market for stocks and bonds permits a continuous revisement of the commitment. Moreover, a greater diversification is possible, thus reducing the risk involved. An investor in stocks may not only continually revise his holdings but he can diversify them in such a way that if he loses on some shares he may gain on others. There is little or no opportunity for the average investor to diversify his holdings of residential property. It is almost inevitable that he carry all his eggs in one basket.

The investor in stocks and bonds also finds himself at an advantage during periods such as the present. Political factors are at work to prevent the "landlord" from "profiteering" during

periods of a housing shortage. It seems to concern no one if the owner of a house loses his property during a period of depression. That is regarded as his own hard luck, or as an indication that he overreached himself. But when a housing shortage develops, the landlord is called a profiteer if he raises his rents, and if he does not heed the growing public animosity, political action will usually follow to prevent him from "holding up" the public by "exorbitant" rental charges. The nature of real estate is such that rents are easily controlled. While during the present emergency almost all ceilings have been revised, and are continuously under heavy pressure for revision, the usual comment is that "rent ceilings are holding very effectively." Yet those ceilings were set at a time when rents had not yet risen far above their depression level. Consequently, while there is no floor under rents, the investor can confidently count on a ceiling whenever a severe housing shortage develops. The investor in stocks, however, though he is not protected by a floor, is not prevented from realizing a large profit during periods of prosperity. While real estate values have advanced some during the past year, it is estimated that during the eleven months previous to April, 1943, stock prices advanced a total of about $25,000,000,000. Real estate prices have been impeded by the relatively low ceiling on rents, and by the regulations imposed upon the sale and transfer of residential property. Thus, the real estate investor who suffered through the depression is prevented from realizing rentals at present which would cover his costs, let alone permit a recovery of his depression losses. It is true, however, that in those cases in which property values were written off during the depression, the depression buyer has been able to realize a fair return. To justify this sort of thing, however, is to admit openly that housing is and can be nothing more than a speculation. The writer is inclined to believe that this observation is true under present conditions, and is likely to remain true in the absence of some form of governmental intervention.

Even though all of the risks can be removed, as is accomplished by the assumptions of the theoretical stationary state, there would be no assurance that all members of the population would be housed in dwellings which meet the minimum stand-

ards. In the first place, there may be those who place housing very low in their scale of preference, and hence are unwilling to spend the proportion of their income which would be necessary to acquire decent housing. In the second place, it is likely that the division of wealth and income in the stationary state would be such that many would find themselves financially unable to command residential facilities of a high quality. Hence, the free operation of the market in an environment from which is removed the inhibiting factors of risk and uncertainty is not likely to bring into existence a supply of housing which meets the standards determined upon the basis of social needs. When we admit into our picture the extraordinary risks involved in the commitment of funds to brick and mortar, it becomes evident that private enterprise can scarcely succeed in satisfying the social demand for housing without some measure of aid on the part of government.

It is as obvious as anything can be that in the past private enterprise has not succeeded in providing housing facilities in measure with its capacity and in harmony with social needs. This simply means that housing as a commercial proposition has not provided an attractive investment, and home-buyers have been reluctant or unable to take the risks involved in home-ownership. If the provision of housing in sufficient supply to meet socially recognized needs were profitable, private enterprise would be sure to respond. It is futile and unfair to indict the building industry for not continuing on a high level of activity when it becomes unprofitable to do so. The private entrepreneur is expected to be guided by the indicator of the market in his decisions concerning production. If private enterprise supplies the goods which the market demands, it has done all it can do. If it is generally believed that the market does not call forth a given good in a sufficient quantity to satisfy the recognized needs of our population, it then becomes necessary for the people as a whole to increase the production of that good by collective action. This does not mean that private enterprise has been a failure. It rather means that there are benefits which flow from the production of this good for which private enterprise can receive no compensation. The production of the good beyond the quantity

indicated by the effective demand of the market would yield dividends to society as a whole, but it would lead to bankruptcy for private enterprise. Such a condition arises, for example, when the supply of a basic necessity that is called forth by the market is inadequate in terms of scientific standards of need. Consequently, it can be accepted as a responsibility of government to provide standard housing for those members of our population who cannot acquire such facilities through the agency of the market place.

It is generally believed in this country that the private enterprise economy, in addition to affording a wider range of personal freedom than can be enjoyed in any alternative system, is more efficient in the use of scarce resources for the satisfaction of our wants. The cumbersome organization of an over-all planning board would, in the end, result in a more wasteful use of our resources than occurs as a result of the mistakes of private entrepreneurs, it is believed. However, although freedom of enterprise should be the rule, there are spheres in which it is generally agreed that collective action is required. Although the area which is suitable for public enterprise has been expanding, the burden of proof for any new expansion of the area must be upon those making the proposal. Many of the leading economists agree that the field of activity left to private enterprise should be as wide as is consistent with the provision of basic necessities for all. Whenever private enterprise fails to provide for basic needs, however, it is widely agreed that we must resort to collective action.

Our conclusion is that the risks confronted by private investors are too great to permit a large enough scale of building, and that those risks must be to a large degree transferred to the government. We have long recognized the desirability of restrictive laws designed to protect communities from the hazards of fire and disease. It is argued here that the standards affecting housing, as set up by such restrictive laws, cannot be met for all citizens by the free operation of the market, unless we assume far-reaching changes in our present economy. It would be far less revolutionary for the government to take measures to assure the maintenance of a minimum standard of housing by direct

action, than to attempt to bring about that result by changing the legal and institutional framework of our society, in order to enable the free market to achieve success in respect to meeting minimum standards. It is agreed, moreover, that the approach exemplified by the TNEC investigation, which endeavored to find ways to cut down the cost of building in order to meet the market of lower-income groups, was for the most part doomed to failure. While it is highly desirable to cut costs whenever and wherever it is possible to do so, it seems rather foolish to devote so much energy to considerations of cost cutting during periods of depression when there are idle resources at every hand. It is also futile to try to cut building costs during a depression to a point which would make new housing competitive with the existing houses on the market.

Since we have concluded that the solution of the housing problem awaits some form of direct aid by government, it is helpful to review briefly what the government has already done in the field of housing. We have previously mentioned restrictive controls in the form of municipal ordinances. It was not until the coming of the Great Depression that the Federal Government took any important part in the housing field. During the ten years since 1932, laws establishing various agencies designed to attack different aspects of the housing problem have been enacted. In general, the federal program has had four primary aims: 1) to preserve the solvency of home-owners and home-financing institutions; 2) to encourage private construction by loans for new homes or for modernization of old ones; 3) to encourage housing construction by loans to limited dividend companies; and 4) to begin public construction of houses for low-income groups. The HOLC was set up to carry out the first aim. The FHLB and the FHA were designed to encourage the flow of mortgage funds into housing. The limited-dividend housing program under the PWA and the FHA has not been successful. The PWA and the USHA provided for housing subsidies for the low-income groups.

The evidence of this study tends to favor an expansion of the FHA phase of the government program. It is proposed that such expansion be carried out even to the extent of involving an ele-

ment of governmental subsidies. The general purpose is to increase the quantity of housing and to leave the ownership of residential facilities in private hands. Since it is probably not feasible for everyone to own his own home, there is likely to be a continued need for rental housing. Thus, it is recommended that the government provide for not only limited-dividends, but for minimum dividends. As to owner-occupied housing, it is recommended that the government make use of a number of variables to encourage or to discourage the construction of new housing in each market area of the country. The variables which may be useful to this end are 1) the size of the down-payment, 2) the rate of interest, 3) the period of amortization, and 4) the required rate of depreciation. While we are not able here to work out any details of this plan, it seems that it would be desirable and defensible to extend very easy terms during a period of depression to responsible people in areas which appear to have a secure future, even though the borrowers may be unemployed. On the other hand, it would not be wise to make loans on new housing in declining areas, unless the rate of amortization were very high and the down-payment were a substantial amount. It is believed that especially easy terms should be granted for houses in the $5000 to $6000 class, since these houses could easily be adapted to the needs of the lower-income groups after a few years. By encouraging a large flow of new houses of this class onto the market, the flow of existing houses down to the lower-income group would be accelerated. It seems that it would be much more desirable to house the lower third of our population in obsolete houses, than in new ones. It is entirely possible, however, that obsolete houses could meet the minimum standards. It is felt that a program such as suggested in outline here would not only be a significant approach toward the rehousing of the lower-income group, but it would also be an important aid to smoothing out the business cycle. It might be regarded wise to use our resources during periods of depression to the end of improving our national estate in a number of ways. It is noteworthy that, during this year when critical materials and labor are extremely scarce, we are building over seven times as many houses as we constructed just ten years ago, during 1933.

VITA

Alvin C. White was born near Moline, Illinois, on March 8, 1912. After securing his elementary education in a rural school, he attended Moline High School. In 1929 he matriculated at Augustana College, in Rock Island, Illinois, and received his A.B. degree in 1933. He was granted a scholarship by the University of Iowa, and engaged in graduate study in the History Department of that University from 1933 to 1935. During the year 1934-1935 he served as an Assistant in History. He then taught in the Estherville High School and Junior College, in Estherville, Iowa, until the summer of 1938. The year 1938-1939 was spent in building a number of houses for investment purposes. Since 1935 he has engaged in various phases of real estate work during vacation periods. In the Fall of 1939 he entered the University of Illinois as a graduate student in Economics. Since the Spring semester of 1941 he has been teaching half-time in the Department of Economics.